

Complete Summary

GUIDELINE TITLE

Practice parameters for the management of hemorrhoids (revised).

BIBLIOGRAPHIC SOURCE(S)

Cataldo P, Ellis CN, Gregorcyk S, Hyman N, Buie WD, Church J, Cohen J, Fleshner P, Kilkenney J 3rd, Ko C, Levien D, Nelson R, Newstead G, Orsay C, Perry WB, Rakinic J, Shellito P, Strong S, Ternent C, Tjandra J, Whiteford M. Practice parameters for the management of hemorrhoids (revised). Dis Colon Rectum 2005 Feb; 48(2):189-94. [41 references] [PubMed](#)

GUIDELINE STATUS

This is the current release of the guideline.

This guideline updates a previous version: American Society of Colon and Rectal Surgeons. Practice parameters for the treatment of hemorrhoids. Arlington Heights (IL): American Society of Colon and Rectal Surgeons; 1993. 4 p.

COMPLETE SUMMARY CONTENT

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SCOPE

DISEASE/CONDITION(S)

Hemorrhoids (external or internal)

GUIDELINE CATEGORY

Evaluation
 Management
 Treatment

CLINICAL SPECIALTY

Colon and Rectal Surgery
Family Practice
Gastroenterology
Internal Medicine

INTENDED USERS

Health Care Providers
Patients
Physicians

GUIDELINE OBJECTIVE(S)

To provide recommendations on the evaluation and management of hemorrhoids

TARGET POPULATION

Patients with symptomatic hemorrhoids

INTERVENTIONS AND PRACTICES CONSIDERED

Evaluation

1. Patient and family history
2. Physical examination
3. Colonoscopy
4. Barium enema with flexible sigmoidoscopy

Treatment

1. Dietary management (i.e., adequate fluid and fiber intake)
2. Office treatment
 - Hemorrhoid banding
 - Sclerotherapy
 - Infrared Coagulation
 - Bicap coagulation
 - Cryotherapy
3. Treatment of thrombosed external hemorrhoids (observation, excision)
4. Surgical hemorrhoidectomy
 - Open or closed hemorrhoidectomy
 - Stapled hemorrhoidopexy (not effective for large external hemorrhoids)

MAJOR OUTCOMES CONSIDERED

- Recurrence rate
- Relief of symptoms
- Complications of surgery

METHODOLOGY

METHODS USED TO COLLECT/SELECT EVIDENCE

Hand-searches of Published Literature (Primary Sources)
Searches of Electronic Databases

DESCRIPTION OF METHODS USED TO COLLECT/SELECT THE EVIDENCE

A literature search of PubMed and MEDLINE from 1990 to 2003 was conducted using the keyword "hemorrhoid"; embedded references also were evaluated.

NUMBER OF SOURCE DOCUMENTS

Not stated

METHODS USED TO ASSESS THE QUALITY AND STRENGTH OF THE EVIDENCE

Weighting According to a Rating Scheme (Scheme Given)

RATING SCHEME FOR THE STRENGTH OF THE EVIDENCE

Levels of Evidence

- I. Evidence obtained from meta-analysis of multiple, well-designed, controlled studies; randomized trials with low false-positive and low false-negative errors (high-power)
- II. Evidence obtained from at least one well-designed experimental study; randomized trials with high false-positive and/or false-negative errors (low-power)
- III. Evidence obtained from well-designed, quasi-experimental studies, such as nonrandomized, controlled, single-group, pre-post cohort, time, or matched case-control series
- IV. Evidence from well-designed, nonexperimental studies, such as comparative and correlational descriptive and case studies
- V. Evidence from case reports and clinical examples

METHODS USED TO ANALYZE THE EVIDENCE

Review
Review of Published Meta-Analyses

DESCRIPTION OF THE METHODS USED TO ANALYZE THE EVIDENCE

Not stated

METHODS USED TO FORMULATE THE RECOMMENDATIONS

Not stated

RATING SCHEME FOR THE STRENGTH OF THE RECOMMENDATIONS

Grades of Recommendations

- A. There is evidence of Type I or consistent findings from multiple studies of Type II, III, or IV.
- B. There is evidence of Type II, III, or IV, and findings are generally consistent.
- C. There is evidence of Type II, III, or IV, but findings are inconsistent.
- D. There is little or no systematic empirical evidence.

COST ANALYSIS

A formal cost analysis was not performed and published cost analyses were not reviewed.

METHOD OF GUIDELINE VALIDATION

Not stated

DESCRIPTION OF METHOD OF GUIDELINE VALIDATION

Not applicable

RECOMMENDATIONS

MAJOR RECOMMENDATIONS

The levels of evidence (classes I-V) and the grades of recommendations (A-D) are defined at the end of the "Major Recommendations" field.

Evaluation of Hemorrhoids

The evaluation of hemorrhoids should include a problem-specific history and physical examination: Level of Evidence, Class V; Grade of Recommendation, D.

A targeted history and physical examination is the initial step in the evaluation of the patient with hemorrhoids. In addition to the nature, duration, and severity of symptoms, the history should include an assessment of dietary fiber intake and bowel habits. In patients with rectal bleeding, a family medical history is needed to evaluate the possibility of familial colorectal neoplastic syndromes and the need for more extensive colon evaluation. The physical examination should typically include visual inspection of the anus, digital rectal examination, and anoscopy. The grade of hemorrhoidal disease can be classified using the definitions in the table below. Laboratory evaluation is not typically required.

Table: Classification of Internal Hemorrhoids

Grade	Physical Findings
I	Prominent hemorrhoidal vessels, no prolapse

Grade	Physical Findings
II	Prolapse with Valsalva and spontaneous reduction
III	Prolapse with Valsalva requires manual reduction
IV	Chronically prolapsed manual reduction ineffective

Evaluation of Rectal Bleeding

Complete colon evaluation with colonoscopy or barium enema with flexible sigmoidoscopy is typically indicated for patients with rectal bleeding who meet specific criteria: Level of Evidence, Class II; Grade of Recommendation, B.

The primary concern of patients with rectal bleeding is the possibility of colorectal neoplasia. Other diagnoses that may need to be excluded include inflammatory bowel disease, other forms of colitis, diverticular disease, and angiodysplasia. A careful history and physical examination are the cornerstones of appropriate use of endoscopic procedures, which may include proctoscopy and/or flexible sigmoidoscopy. More extensive endoscopic evaluation with complete colonoscopy or flexible sigmoidoscopy combined with barium enema is indicated for those who fulfill the criteria in the table below.

Table: Indications for Complete Colon Evaluation*

- Age \geq 50 years if no complete examination within 10 years
- >40 years with history positive for a single, first-degree relative with colorectal cancer or adenoma diagnosed at age >60 and no complete examination with 10 years
- >50 years if the history is positive for two or more first-degree relatives with colorectal cancer or adenomas diagnosed at age >60 and no complete examination within 3 to 5 years
- Positive fecal occult blood test
- Iron-deficiency anemia

*Adapted from the Multi-Society Task Force on Colorectal Cancers

Medical Treatment for Hemorrhoids

Dietary management consisting of adequate fluid and fiber intake is the primary noninvasive treatment of symptomatic hemorrhoids: Level of Evidence, Class II; Grade of Recommendation, B.

The typical symptoms of internal hemorrhoids are rectal bleeding and prolapse. Nonoperative treatment is ineffective for hemorrhoids with significant prolapse (Grades III-IV) and consideration should be given to more aggressive treatment modalities. For hemorrhoids with lesser prolapse, dietary management with adequate fluid and fiber intake to avoid straining is effective.

Dietary management also is the primary modality in the treatment of hemorrhoidal bleeding.

Office Treatment

Most patients with refractory Grades I, II, or III hemorrhoids are candidates for office-based procedures. Hemorrhoid banding is usually the most effective option. Other options include sclerotherapy, infrared coagulation, bicap coagulation, and cryotherapy: Level of Evidence, Class I; Grade of Recommendation, B.

Office treatment of hemorrhoids includes several procedures, which all attempt to decrease vascularity, decrease hemorrhoidal volume, and increase fixation of the fibrovascular cushion to the rectal wall. This leads to improvement in the specific symptoms of prolapse and rectal bleeding.

A single hemorrhoid or multiple hemorrhoids may be ligated with rubber bands per session.

Sclerotherapy involves injecting a sclerosant into the apex of the hemorrhoid and is effective in 75 to 89 percent of patients with Grades I, II, and III hemorrhoids. This has been associated with slightly less pain than hemorrhoidal banding. It has been used in combination with rubber band ligation with increased success rates.

Infrared coagulation involves direct application of infrared waves resulting in protein necrosis. It is most applicable to Grades I and II hemorrhoids but is associated with high rates of recurrence when substantial prolapse is present.

The application of both direct current and bipolar current has proven useful in the treatment of Grades I to III hemorrhoids. Bicap (bipolar current) has the advantage that treatment application lasts only several seconds compared with eight to ten minutes per application for direct current. Both are associated with a minor complication rate of 10 percent and recurrence rates between 25 and 35 percent.

Cryotherapy uses cold coagulation to relieve symptoms.

The incidence of minor complications after the various office-based procedures is reasonably similar.

Thrombosed External Hemorrhoids

Treatment options include observation or excision; however, excision, within 48 to 72 hours of onset of symptoms, in the office setting under local anesthesia or occasionally in the operating room will result in the most rapid relief from symptoms: Level of Evidence, IV; Grade of Recommendation, B.

External hemorrhoids may thrombose spontaneously, possibly secondary to straining at stool or heavy lifting. The exact etiology remains unknown. There is little scientific data comparing treatment options for external hemorrhoidal thrombosis. Clinical experience leads to the recommendation that individuals with symptoms who present fewer than 48 to 72 hours will be best treated by local excision of the external component. This can commonly be performed in the office setting but may occasionally require treatment in the operating room because of large size, extension within the anal canal, or patient anxiety.

Thrombosis that has been present for more than 72 hours often can be treated expectantly if the pain is not too severe. In this circumstance, avoidance of constipation, patient analgesia, and ice or sitz baths to the perineum may result in more rapid symptom relief than will surgical excision. Simple incision and evacuation of the clot should be avoided, because the lesion is typically made up of multiple, small, intravascular thromboses rather than a single hematoma. Also, simple incision and drainage often results in rethrombosis at the original site and even extension to include circumferential hemorrhoidal thrombosis.

Surgical Hemorrhoidectomy

Hemorrhoidectomy should be reserved for patients refractory to office procedures or unable to tolerate office procedures, patients with large external hemorrhoids, or patients with combined internal and external hemorrhoids with significant prolapse (Grades III-IV): Level of Evidence, I ; Grade of Recommendation, B.

Individual patient factors and preferences need to be carefully weighed and considered. Surgical options include open or closed hemorrhoidectomy performed with surgical scalpel, diathermy, laser, or ultrasonic scalpel. All are reasonable options with none having a clear advantage over any other.

Stapled hemorrhoidopexy is a new alternative available for individuals with significant hemorrhoidal prolapse. It involves a mucosal and submucosal, circular resection of the hemorrhoidal columns at their apex. In addition, the blood supply is interrupted and hemorrhoids are "fixed" to the distal rectal muscular wall. This is all accomplished by a single firing of a modified, circular anastomotic stapler. Exceptionally rare but potentially devastating complications include anovaginal fistula, substantial hemorrhage, fistula, retroperitoneal sepsis, and rectal perforation.

Definitions:

Levels of Evidence

- I. Evidence obtained from meta-analysis of multiple, well-designed, controlled studies; randomized trials with low false-positive and low false-negative errors (high-power)
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Grades of Recommendations

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CLINICAL ALGORITHM(S)

None provided

EVIDENCE SUPPORTING THE RECOMMENDATIONS

TYPE OF EVIDENCE SUPPORTING THE RECOMMENDATIONS

The type of supporting evidence is identified and graded for each of the recommendations (see "Major Recommendations" field).

BENEFITS/HARMS OF IMPLEMENTING THE GUIDELINE RECOMMENDATIONS

POTENTIAL BENEFITS

Appropriate evaluation and management of patients with symptomatic external and/or internal hemorrhoids

POTENTIAL HARMS

- Both direct current and bipolar current treatments are associated with a minor complication rate of 10 percent and recurrence rates between 25 and 35 percent.
- A series of 502 patients who underwent hemorrhoid banding reported minor pain in 2 percent, band slippage in 1 percent, development of a symptomatic post banding ulcer in 0.4 percent, and urinary retention and anal pain in <1 percent each.
- Major complications after office-based procedures occurred in 2.5 percent of patients; these included significant hemorrhage, severe pain from external hemorrhoidal thrombosis, or pelvic infection.
- An analysis of 18 prospective, randomized trials found surgical hemorrhoidectomy to be the most effective treatment for hemorrhoidal disease. However, it also was associated with the highest complication rate and the most postoperative disability.
- Exceptionally rare but potentially devastating complications to stapled hemorrhoidopexy include anovaginal fistula, substantial hemorrhage, fistula, retroperitoneal sepsis, and rectal perforation.

QUALIFYING STATEMENTS

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- These guidelines are inclusive, and not prescriptive. Their purpose is to provide information on which decisions can be made, rather than dictate a specific form of treatment. It should be recognized that these guidelines should not be deemed inclusive of all proper methods of care or exclusive of

- methods of care reasonably directed to obtaining the same results. The ultimate judgment regarding the propriety of any specific procedure must be made by the physician in light of all of the circumstances presented by the individual patient.
- The practice parameters set forth in this document have been developed from sources believed to be reliable. The American Society of Colon and Rectal Surgeons makes no warranty, guarantee, or representation whatsoever as to the absolute validity or sufficiency of any parameter included in this document, and the Society assumes no responsibility for the use or misuse of the material contained here.

IMPLEMENTATION OF THE GUIDELINE

DESCRIPTION OF IMPLEMENTATION STRATEGY

An implementation strategy was not provided.

INSTITUTE OF MEDICINE (IOM) NATIONAL HEALTHCARE QUALITY REPORT CATEGORIES

IOM CARE NEED

Getting Better

IOM DOMAIN

Effectiveness

IDENTIFYING INFORMATION AND AVAILABILITY

BIBLIOGRAPHIC SOURCE(S)

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ADAPTATION

Not applicable: The guideline was not adapted from another source.

DATE RELEASED

1993 (revised 2005 Feb)

GUIDELINE DEVELOPER(S)

American Society of Colon and Rectal Surgeons - Medical Specialty Society

SOURCE(S) OF FUNDING

Not stated

GUIDELINE COMMITTEE

Standards Task Force of the American Society of Colon and Rectal Surgeons

COMPOSITION OF GROUP THAT AUTHORED THE GUIDELINE

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FINANCIAL DISCLOSURES/CONFLICTS OF INTEREST

Not stated

GUIDELINE STATUS

This is the current release of the guideline.

This guideline updates a previous version: American Society of Colon and Rectal Surgeons. Practice parameters for the treatment of hemorrhoids. Arlington Heights (IL): American Society of Colon and Rectal Surgeons; 1993. 4 p.

GUIDELINE AVAILABILITY

Electronic copies: Available in Portable Document Format (PDF) from the [American Society of Colon and Rectal Surgeons Web site](#).

Print copies: Available from the ASCRS, 85 W. Algonquin Road, Suite 550, Arlington Heights, Illinois 60005.

AVAILABILITY OF COMPANION DOCUMENTS

None available

PATIENT RESOURCES

None available

NGC STATUS

This summary was completed by ECRI on February 15, 2000. The information was verified by the guideline developer on November 7, 2000. This summary was updated by ECRI on July 15, 2005.

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